

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, D.C. 20314

ER 70-1-5

CERD-ZA

Regulation
No. 70-1-5

31 December 1989

Research and Development
CORPS OF ENGINEERS RESEARCH AND DEVELOPMENT PROGRAM

1. Purpose. This regulation prescribes USACE (U.S. Army Corps of Engineers) policy and delegates the authority for managing and executing the USACE Military, Civil Works and Mission Support Research and Development (R&D) programs.

2. Applicability. This regulation is applicable to all HQUSACE elements, OCE, all USACE R&D Laboratories and all USACE field operating activities (FOA).

3. Reference.

a. OCE General Order 4, 30 January 1974, "Reorganization of CE Research and Development Management."

b. AR 70-1

c. A4 70-9

d. AR 37-27

e. AR 70-57

f. ER 570-2-2

g. ER 1140-1-211

h. EP 70-1-3

4. Background. The reference 3a General Order centralized management of the Corps of Engineers R&D program in the Research and Development Management Office (RDMO), OCE, effective 28 January 1974. This centralization included the activities at all Corps Laboratories (excluding Division and District Laboratories) carried out under all applicable appropriations and mission support funds. The RDMO was subsequently renamed the Directorate of Research and Development (DRD) in 1981. This regulation describes the policy and responsibilities for implementing this consolidation.

5. Definitions. The term Laboratory within this regulation refers to the Waterways Experiment Station, the Construction Engineering Research Laboratory, the Cold Regions Research and Engineering Laboratory, and the Engineer Topographic Laboratories. It also includes the elements of the Institute of Water Resources, the Hydrologic Engineering Center, and the Toxic and Hazardous Materials Agency which conduct R&D activities. It does not

This regulation supersedes ER 70-1-5, 20 September 1974; ER 70-1-7, 20 September 1974; ER 70-1-8, 16 May 1980; ER 70-1-10, 31 January 1984; and Appendix E, ER 70-1-11, 15 June 81; rescinds ER 70-1-6, 18 May 1981; and cancels Eng Form 4860-R, Nov 83.

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include the USACE Division and District Laboratories. For additional definitions see Appendix A.

6. R&D Program Structure and Basic Responsibilities. The USACE R&D Program is divided into three major programs: 1) The Military RDT&E Program, consisting of support to the Army in the Field (Military Engineering) and support to the Army in Garrison (Base Support and Environmental Quality), 2) The Civil Works R&D program and 3) The Mission Support or Reimbursable R&D Program.

a. The Military Engineering portion of the Military RDT&E Program is conducted in support of the Army in the Field and covers environmental sciences, combat operations and echelons above corps support. The major Proponent is the U.S. Army Engineer Center and School, other Proponents include HQ Training and Doctrine Command (TRADOC), other TRADOC centers and schools, CINCs, Deputy Chief of Staff for Intelligence (DCSI), Deputy Chief of Staff of Logistics (DCSLOG), Army Material Command activities, other MACOMs and other Army organizations. Functional Area Monitors are provided by the Military Engineering and Topographic Division (DAEN-ZCM) of the Office of the Chief of Engineers. The program is managed in DRD by the Assistant Director for Research and Development (Military Programs), CERD-M. The requirements and detailed responsibilities for managing and executing this program are found in ER 70-3-9.

b. The Base Support and Environmental Quality portions of the Military RDT&E program support the Army's Military Construction and Operation and Maintenance programs. It supports the USACE districts and divisions, the MACOMs, and the installations' Directorate of Engineering and Housing (DEH). The major Proponents are the Military Programs (MP) Directorate, and the Facilities Engineering (CEHSC-F) and Environmental (CEHSC-E) Divisions of the US Army Engineering and Housing Support Center (CEHSC), and the Installation Planning Division (ZCI) of the Office of the Assistant Chief of Engineers (OACE). The Proponents provide the Technical Monitors. The program is managed in DRD by the Assistant Director for Research and Development (Military Programs), CERD-M. The requirements and detailed responsibilities for managing and executing this program are found in ER 70-3-9.

c. The Civil Works R&D Program is conducted in support of the USACE Divisions and Districts, the Civil Works (CW) Directorate, and the Engineering and Construction Directorate. The major Proponents are the Civil Works and Engineering and Construction Directorates, USACE. Technical Monitors are provided by the Proponents. The program is managed in DRD by the Assistant Director for Research and Development (Civil Works Programs),

CERD-C. The requirements and detailed responsibilities for managing and executing this program are found in ER 70-1-11 and ER 70-2-6.

d. The Mission Support or Reimbursable program is funded by the user who provides the Technical Monitor. Although funded by the user to solve a particular problem, the research must support the Corps' Military or Civil Works missions. The reimbursable program is managed by CERD-M or CERD-C depending on which R&D mission area the program supports. The Assistant Director for Research and Development (Laboratory Operations), CERD-L, provides administrative support to CERD-M and CERD-C in monitoring the reimbursable program. The requirements and detailed responsibilities for managing and executing this program are found in Appendix B.

7. Policy.

a. The R&D process covers the entire problem solving spectrum from deficiency identification through final implementation of the R&D product. All participants including Users, Proponents, DRD, Laboratories, and MACOMs will actively work together, throughout the entire R&D process, to help assure the successful resolution of the identified problem. DRD has the responsibility to foster this cooperative participation.

b. The USACE R&D program will include active participation of all members of the Army family including HQUSACE/OCE; all USACE elements including FOAs; Major Command/Headquarters (MACOM/HQ); and Directorates of Engineering and Housing (DEH) to ensure that the USACE R&D program is responsive to the Army requirements which are within the USACE mission.

(1) The USACE R&D community will work closely with US Army Engineer Center and School, Training and Doctrine Command (TRADOC) HQ, and other TRADOC centers and schools to insure that the USACE Military Engineering Research, and Development, Test, and Evaluation (RDT&E) program is responsive to issues identified in the TRADOC Concept Based Requirements System (CBRS).

(2) For the military engineering RDT&E program in support of missions not addressed by TRADOC CBRS, and for the Base Support and Environmental Quality RDT&E programs, the USACE will implement a system which will involve all members of the Army family in developing Mission Area Deficiency Statements (MADS) as requirements for these programs.

(3) For the Civil Works R&D program, USACE will manage a system in which R&D needs are identified by FOAs and others and brought forth during annual program reviews for inclusion in the program.

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c. The USACE R&D Laboratories will maintain state-of-the-art expertise in technology areas within the USACE mission areas needed to overcome identified deficiencies. They will execute the R&D program in accordance with the guidance provided by DRD.

d. HQ USACE relationship with the USACE R&D community will consist of staff supervision and technical monitorship through normal command channels.

(1) The Directorate of Research and Development (DRD) will exercise staff supervision of USACE Laboratories. DRD will develop and implement the procedures by which the R&D program and Laboratories are managed. DRD is responsible for development of the R&D program guidance and approval of the R&D program and Mission Support Programs. DRD is responsible for developing a Civil Works R&D program for approval by the Civil Works R&D Committee and the Director of Civil Works, HQUSACE.

(2) HQUSACE directorates (other than DRD) and the OACE, as Proponents for the R&D program monitor the performance of the Laboratories for conformance to approved plans and notify DRD of variations in plans.

e. Direct communication and a full and free dialogue will be established between all members of the Army family during the three stages of R&D program: program development, execution, and technology transfer. Proponents, Laboratories, and FOAs will make use of Corps wide and Army wide Groups and Teams established to coordinate the insertion of technology into Army Operations.

(1) During program development, communications will be maintained to assure a clear understanding of the requirements and to insure that the R&D is responsive to the requirements particularly with regard to the timeliness, priority, form of the final product, and feasibility of technology transfer. Unresolved issues raised with regard to requirements, timeliness and products will be resolved by the Proponent in coordination with the Laboratory and DRD. Unresolved issues raised concerning priorities and funding will be resolved by DRD in coordination with the Proponent and the Laboratory.

(2) During program execution, communication will be maintained to assure that the R&D being performed is in accordance with the approved program plan. Unresolved issues raised in this stage will be resolved by DRD in coordination with the Proponent and the Laboratory.

(3) During technology transfer, communication will be maintained to facilitate the appropriate application of R&D results. Unresolved issues raised in this stage will be resolved by the Proponent in coordination with DRD and the Laboratory.

f. The USACE R&D technology transfer program will include the active participation of all members of the Army family to assure that the products of the Corps R&D program are usable, appropriate for transfer, and transferred in a timely manner. The procedures for executing technology transfer are described in ER 70-3-9 for the Military RDT&E Programs, ER 70-1-11 and ER 70-2-6 for the Civil Works Program, and in Appendix B for the reimbursable R&D program.

(1) Within the Army, the Proponent for a particular R&D product is responsible for insuring that technology transfer is adequate. Proponents within USACE/OCE are responsible for managing the technology transfer process, including the extent of technology transfer.

(2) Technology developed through the Corps' R&D program shall be considered for transfer to other DOD and Federal Agencies, State and local governments and private enterprise as authorized by security regulations, the Stevenses-Wydler Act and the Technology Transfer Act of 1986. It is the joint responsibility of the Proponents and DRD to bring to the attention of these organizations the possible utilization of USACE developed technologies and assist them in the transfer of this technology to the maximum extent possible.

(3) Technology developed through the USACE R&D program shall be considered for transfer to foreign governments on a case-by-case basis. DRD will decide each case after discussion with appropriate officials.

g. The reimbursable R&D program is a critical adjunct to the direct funded R&D program. The reimbursable program has two major functions. First, it provides R&D customers with access to the USACE R&D capabilities to assist them in executing their mission. Second, the reimbursable program directly supports the direct funded program by: 1) filling in gaps in the Military RDT&E, and Civil Works R&D programs; 2) supplementing direct demonstration funding such as Military RDT&E 6.3A and Civil Works general investigation (GI) funding, 3) facilitating technology transfer, and 4) providing physical and numerical modeling and analysis capabilities to support Corps Division and Districts. Because of its importance, the reimbursable program requires oversight and management equivalent to the direct funded program.

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(1) The policies and procedures covered herein extend and supplement: the performance of work for other Federal Agencies and the performance of work for State and local governmental units authorized in ER 1140-2-211, policies noted in AR 70-57, and policies set forth in the Technology Transfer Act of 1986. The procedures for managing the reimbursable program are in Appendix B.

(2) R&D performing elements will notify USACE Directorates and Separate Offices and OACE of technology under development for another customer which may be applicable to their responsibilities. USACE Directorates and OACE will evaluate such technology and determine applicability to their responsibilities. The Directorate will inform DRD as to the applicability of the new technology and will take appropriate actions to transfer the technology.

h. Laboratories will manage their overall R&D program to develop and exploit synergy among the RDT&E, Civil Works and Reimbursable programs so as to optimize use of manpower allocations, reduce costs and enhance technical productivity.

8. R&D Program Management. In its management of the R&D programs, the Directorate of Research and Development is supported by the Proponents, and the performing Laboratories. DRD program management is based on program, manpower and financial documentation and reporting, and formal and informal program reviews and management reports.

a. Program documentation is the formal reporting, for management purposes, of the R&D program planning and the execution of the program against that plan. It does not include the reporting of the technical results of the R&D program. The requirements for program documentation are described in ER 70-3-9 for the Military R&D Program, ER 70-1-11 and ER 70-2-6 for the Civil Works Program, and in Appendix B for the reimbursable R&D program.

b. USACE R&D activities are subject to manpower and financial controls. For Civil Works funded work, Full Time Equivalent (FTE) manyear expenditure authorizations are provided (see ER 570-2-2). For military funded programs, Work Year and Annual Funding Targets (AFT) for personnel costs are assigned. Work for others comprises a large portion of the total Corps Laboratory effort, and therefore financial and manpower resources must be balanced against program requirements. To properly track resource utilization, it will be necessary for each Laboratory to prepare projected and actual manpower and financial documentation. The requirements for documenting and reporting manpower requirements and utilization and financial execution are described in Appendix C.

c. Program reviews assist DRD in monitoring and providing direction to the Military RDT&E program. These reviews are formal in nature, stress interaction between HQUSACE and the Laboratory staff and consist of 1) the Proponent Review meetings and 2) In-Process Reviews (IPRs). The details on the conduct of these reviews are described in ER 70-3-9 for the Military R&D program.

d. Management reports and reviews assist DRD in its management of the R&D program and Laboratory operations. These consist of both regularly scheduled and as needed reviews and reports and include: 1) Periodic DRD/Lab Commanders and Directors meetings, 2) Direct personal contacts, 3) Special Program reviews, and 4) Quarterly Command Management Review (CMR) Input (RCS:DAEN-RD-6). The details on the conduct of these reviews are contained in Appendix C.

9. Foreign Visitors. All Corps offices, agencies and FOA are DOD activities and are subject to all DOD and DA regulations and procedures as they pertain to the visits of foreign nationals. The procedures for obtaining permission for foreign visitors require a minimum of 30 days advance notice and receipt of security clearance from ODCSINT. Any questions about foreign visitors should be addressed to CEPMS-S. The foreign visitor procedures are outlined briefly below:

a. Approval for visits under the provisions of AR 380-10 is granted only for brief stays, normally not to exceed five working days. Requests for recurring visits on an intermittent basis may be proposed and approved in cases where such approval would serve the mutual interests of all parties, The maximum period for the recurrent visits under a single request is 12 months from the date of approval. Requests for recurring brief visits will be accomplished in accordance with AR 380-10.

b. Visits of a longer duration (in excess of 5 days) are granted only as part of an approved program of training or security assistance. Long term training visits to the U.S. are normally considered exchanges and are governed by AR 614-10. Exchanges are allowed only if reciprocity exists (i.e. one-for-one exchange). Long term visits by foreign nationals to Corps activities for training without equal reciprocity, regardless of what benefit the Corps may receive, are classified as security assistance and must be processed under the provisions of AR 12-14. Long term visits that do not meet the requirements for reciprocal exchanges or security assistance are not authorized.

c. Foreign personnel who require constant access to DA agencies may be granted functional accreditation to that agency by ODCSINT. Functional accreditation is achieved through diplomatic channels,

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and is normally granted in cases where a foreign government representative conducts a large volume of routine business with a DA element. Functional accreditation is based on intergovernmental agreements and approved programs which specifically authorize the placement of foreign personnel within the DA agency. All such programs must be coordinated with the DA Staff, and will be in accordance with Chapter 6 of AR 380-10.

d. Under limited circumstances, foreign personnel may be integrated into the DA workforce in furtherance of an approved formal agreement between the U.S. Army and a foreign military establishment or between the U.S. Army and another U.S. agency acting on behalf of foreign representatives. Integration of foreign personnel is controlled by the provisions of AR 380-10. Nominations for integrated personnel must be processed through ODCSINT and appropriate foreign liaison channels.

e. USACE offices and individuals should not extend invitations to visit our facilities to foreign nationals, including those encountered at international conferences and meetings.

10. Reprogramming Authority. A Laboratory Commander's reprogramming authority is prescribed in Appendix D.

FOR THE COMMANDER:



ALBERT J. GENETTI, JR.
Colonel, Corps of Engineers
Chief of Staff

4 Appendices
A-Definitions
B-Work for Others
C-Management Reports
D-Reprogramming Authority

APPENDIX A

DEFINITIONS

1. Research and Development - The term Research and Development (R&D) covers the entire spectrum of scientific and engineering investigations ranging from basic to the most applied (to include the technology transfer phase) regardless of the source of funding. It covers all types of technical investigation in which the aim is to develop new knowledge or new capabilities. It can result in hardware/equipment development, computersoftware, new procedures, new techniques, and new information. It excludes those investigations that consist of routine collection of data and/or testing of materials, instruments, and designs aimed only at numerical determination of their properties for direct application in design or construction of a specific Military Construction or Civil Works project.

2. Reimbursable R&D Program - Any R&D program executed by the Laboratories other than those funded under the Military RDT&E appropriation, or the Civil Works Direct appropriation.

3. User - The organization(s) or agency which are the ultimate users of the results of an R&D effort.

4. Proponent - Organization (generally a headquarters organization) responsible for the implementation of the results of the research program. The Proponent usually acts as the representative for the User.

5. Technical Monitor - Professional person in a Proponent's organization assigned to: a) serve as the Proponent's principal point of contact for a work unit, b) monitor the execution of assigned work units against approved program plan, and c) discharge Proponent's other responsibilities as assigned.

6. Functional Area Monitor - Professional person from DAEN-ZCM responsible for monitoring research in a Military Engineering R&D Functional Area which is focused to correct or relieve an MAA/BDP deficiency. Assist DRD in coordinating, developing and defining appropriate technology demonstrations.

7. Mission Area Analysis (MAA) - An assessment performed by TRADOC of the capability of a force to perform within a particular battlefield or functional area.

8. Mission Area Deficiency Statement (MADS) - A statement of the deficiency in a Corps mission area not covered by an Army Mission Area Analysis (MAA).

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9. Battlefield Development Plan (BDP) - The summary of select issues identified during Mission Area Analyses (MAA'S). It integrates and prioritizes issues across mission areas and presents them to HQDA.

10. Field Review Groups - A group of FOA personnel who act as a consultant to the Technical Monitor, Program Manager and CERD-C for a Civil Works Research Program or Area, and (1) assist in timely technology transfer of R&D results, (2) attend and participate in annual Program Reviews, (3) assist the Program Manager and Technical Monitor in establishing priorities, (4) assist in proposing new research items/areas, and (5) assist in identifying and coordinating FOA demonstration opportunities for R&D products. Membership is recommended by the Technical Monitor and approved by the Director of Civil Works and the Director of Research and Development.

APPENDIX B

WORK FOR OTHERS
LABORATORY RESEARCH AND DEVELOPMENT AND TESTS

1. Purpose. This appendix defines and establishes the procedures for managing the mission support research development and testing program conducted at Corps of Engineers (CE) Laboratories for other military and governmental agencies and organizations, foreign governments and private firms.

2. Conditions for Accepting Reimbursable Programs. Subject to the authority limitations contained in Paragraph 3, research and development and tests may be performed for other agencies of the Federal Government, State and local governments, foreign governments and private firms under the following conditions:

a. The work is performed on a cost reimbursable basis; or on a cooperative basis when DRD approved MOUs have been executed.

b. Performance of the work will not interfere with performance of the direct funded R&D program or services essential to the mission of the Corps.

c. Performance of the work will not require an increase in the permanent staff and can be performed within personnel resource allocations unless the funding agency provides the additional personnel resources.

d. The work is within the scope of authorized activities of the Laboratory at which the work is to be performed. Reimbursable projects must be in the Laboratories' mission area and in direct support of the long range direct allotted program although the direct allotted program need not be funded. For example, a reimbursable project should fit into the Mission/Functional Area/Work Package/Budget Package structure used in the Long Range Science and Technology (LRS&T) plan or the Research Area structure used in the Civil Works R&D plan.

e. Performance of the work will not be adverse to the public interest.

f. Work without a DRD approved MOU will not be performed for foreign government or private firms unless it is firmly established that other non-Federal Laboratory facilities capable of performing the services are not available, or because of location or for other reasons it is clearly impractical to utilize other Laboratory services. This does not apply to work covered by Cooperative R&D agreements under the Technology Transfer Act of 1986.

g. Prior to performing any research and development or tests for private firms, USACE Laboratories will obtain a written certification from such firms stating that the results of the work to be performed will not be used in litigation or for promotional purposes.

3. Authority to Accept Reimbursable Work. Subject to the policy provisions in paragraph 2 of this appendix, the Laboratories are authorized to accept reimbursable work for others under the following conditions.

a. The Commanders and Directors of WES, CERL, ETL, CRREL, IWR, and the Hydrologic Engineering Center (HEC) are authorized to perform reimbursable work in accordance with any applicable DRD approved memorandum of understanding (MOU) or cooperative R&D agreement under the Technology Transfer Act of 1986.

b. The Commanders and Directors of WES, CERL, CRREL, ETL, IWR and HEC are delegated authority to perform reimbursable research and development for other Army and Federal agencies, and for State and local governmental agencies if the total estimated cost of each request is \$200,000 or less. DRD will be advised (Attn: CERD-L), upon acceptance, of each reimbursable effort exceeding \$50,000, including an information copy of the applicable proposal. Reimbursable work for other Army and Federal agencies, and for State and local governmental agencies which exceeds \$200,000 requires DRD authorization prior to initiation of work. Authorization request shall be addressed to CERD-L and should include a copy of the technical proposal, an explanation of how the work complements or impacts ongoing research, and an identification of any impacts on manpower utilization. Prior DRD approval is not required if the research is conducted in accordance with subparagraphs 3a and 3f. Upon receipt of funds for reimbursable projects exceeding \$50,000, the Laboratories will forward to CERD-L the title of the work effort and a short one paragraph description of the research effort from which CERD-L can prepare a Daily Staff Journal entry.

c. USACE R&D Laboratories are authorized to submit technical proposals directly to other Federal agencies covering proposed work in their assigned fields. Authority to perform work must still meet the guidelines and policies established within this regulation.

d. The Commanders and Directors of WES, CERL, CRREL and ETL are delegated authority to perform reimbursable research and development for U.S. private firms when the total estimated cost of each request is \$20,000 or less. The authority to perform sampling and testing of cement and pozzolan for private firms is restricted to \$10,000. DRD authorization is required when estimated costs

exceed this authority. Authorization requests shall be submitted in the same manner as paragraph 3b. DRD approval is not required if the research is conducted in accordance with subparagraphs 3a and 3f.

e. All reimbursable work for foreign governments must be authorized by CERD-ZA regardless of cost. Authorization requests shall be submitted in the same manner as paragraph 3b.

f. Corps R&D Laboratories are authorized to participate in the Federal Laboratory Consortium. Participation in the Federal Laboratory Consortium is not subject to the limitations of paragraph 3b. Participation in this consortium and efforts undertaken to adapt existing technology or ongoing research for transfer to the civil sector as a result of participation shall be subject to the provisions of the appropriate regulations covering the Federal Laboratory Consortium.

4. Reporting Requirements (RCS:DAEN-RD-4).

a. Each Laboratory will input its reimbursable projects into the RDMIS. Reimbursable projects must be assigned to a budget package within the LRS&T plan or the Research Area structure used in the Civil Works R&D plan. Projects that do not fall into the RDT&E or CW structure can be implemented in the mission area called Commander's Initiative. Up to 15% of the reimbursable program can be assigned to this mission area. Reimbursable projects in excess of \$50,000 will be input as individual projects. Reimbursable projects under \$50,000 can be combined with similar projects in the same budget package and input as one effort. The user manuals for the RDMIS and CWMIS program show the data fields to be used for submitting the reimbursable program data base. The reimbursable program data base will be submitted to the attention of CERD-L within 15 working days after the end of each quarter.

b. Other documentation for the reimbursable program will be submitted by USACE Laboratories to the sponsoring agency in accordance with their instructions. Copies of all progress and technical reports will be sent to CERD-L.

5. Reimbursement for Work Performed.

a. Federal Agencies. Reimbursement for work for the Department of Defense, the Department of the Army, and other Federal Agencies will be in accordance with the procedures prescribed in AR 37-27.

b. Private Firms and Foreign Government. Funds to cover the total estimated cost of the work or an initial increment of the estimated cost based on an approved schedule of payment will

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be deposited with the installation performing the work before any obligations or expenses in connection with the work are incurred; and when funds are being deposited on an approved schedule, no obligations or expenses will be incurred in connection with the work in excess of funds on deposit. Charges shall include a surcharge of 15% of all applicable costs, except under the following conditions:

(1) When the final product will directly contribute to planning, design, research or construction activities in which Federal funds are involved by grant or otherwise.

(2) Where an exception is granted based on a direct benefit to the Government. Adequate justification, outlining the direct benefits which are expected to accrue to the Government, will be forwarded to CERD-L, for review and approval prior to deletion of the surcharge.

(3) Where a Cooperative R&D agreement is executed under the Technology Transfer Act of 1986 in which the surcharge is specified.

c. State and Local Governments. Work for State and local governments will be performed only to the extent that cash has been received and deposited with the U.S. Treasury in advance of actual obligations. When the work for State and local governments is to be performed as part of an authorized Civil Works project, reimbursement may be made in annual installments during the period of performance in accordance with Section 40 of the Water Resources Development Act of 1974.

APPENDIX C

MANAGEMENT REPORTS

1. This Appendix describes the management reports specified in paragraph 8. Management reports consist of the following:

a. Periodic Laboratory Commander/Directors Meetings. These are meetings planned by DRD and attended by Laboratory Commanders and Directors, Technical Directors, and DRD personnel. The meetings are for communicating current command policy, guidance, and programs dealing with the management of CE R&D Programs and Laboratories, and to discuss R&D problems.

b. Direct Personal Contacts. This represents the basic means for the technical monitorship of on-going research projects between R&D Performing Elements and Proponents. It includes those visits, telephone conversations or exchanges of information and data required to assess previously defined and approved program activities. To minimize the impact on Laboratory and Proponent personnel, formal written reports between Proponents and the Laboratories will consist of already existing documentation or that documentation prescribed in ER 70-3-9 and ER 70-1-11 and ER 70-2-6. In instances where special reports are needed on specific work units to amplify the standard reporting requirements, these reports must be requested by the Proponent through DRD.

c. Special Program Reviews. These reviews will be conducted as needed by the Director of Research and Development and the DRD Staff. They will constitute a detailed review of selected research being performed and will be conducted at the Laboratory. The objectives are to: evaluate program execution in relation to the approved program, evaluate adequacy and use of available resources, and evaluate technical progress of the research program.

d. Quarterly Command Management Review (CMR) Input (RCS:DAEN-RD-6). These reviews are conducted to keep the Commander USACE and his staff informed on the latest developments and to identify and eliminate or mitigate problems which adversely affect mission accomplishment. They are normally conducted 5 to 6 weeks after the close of the fiscal quarter. The Director of Research and Development will notify the Laboratories, prior to the end of the quarter, of the data/information required to be provided to DRD for the CMR. The required data is due CERD-L 10 working days after the close of the quarter.

APPENDIX D

REPROGRAMMING AUTHORITY

1. Purpose. This appendix prescribes the reprogramming authority of R&D Laboratories for the Civil Works and the Military R&D programs.

2. Applicability. This appendix is applicable to all R&D Laboratories.

3. Civil Works Research Areas, Programs and Work Units.

a. Laboratories may reprogram between work units within a Research Program under the constraints identified below. Such actions will be coordinated with the appropriate Technical Monitors.

REPROGRAMMING WITHIN RESEARCH PROGRAM

<u>Program Element</u>	<u>Current FY Funding</u>	<u>Reprogramming Limited to the Lessor Amount</u>
Work Unit	\$0 to \$100,000 > \$100,000	50% or \$25,000 25% or \$100,000

b. R&D Performing Elements may start wholly new efforts or stop ongoing efforts during the course of a year or reprogramming funds in excess of those in a above only after coordination with the appropriate Technical Monitor and approval by CERD-C.

c. Funds shown under "Reprogramming Limited to the Lesser Amount" is a cumulative total for a work unit during the course of a year and shall not be exceeded without approval of CERD-C after coordination with the appropriate Technical Monitor.

d. Laboratories may reprogram between Research Programs under the constraints identified below. Coordination with Technical Monitors will be accomplished prior to such reprogramming. When reprogramming of funds between programs is desired, the action will not be taken without approval of CERD-C after coordination with the appropriate Technical Monitors.

REPROGRAMMING BETWEEN RESEARCH PROGRAMS

<u>Program Element</u>	<u>Reprogramming Limited to the Lessor Amount</u>
Research Program	25% of Initial Allowance or \$200,000

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e. Reprogramming of funds between Research Areas must be approved by CERD-C.

f. A copy of documentation for all reprogramming actions will be provided to CERD-C and the appropriate Technical Monitors.

g. No reprogramming may be made that results in an increase to a program element that was omitted, deleted or specifically reduced by Congress.

4. Military Program Elements and Projects. The Laboratory Commander and Director is authorized to reprogram his Laboratory's Military RDT&E program within the following provisions:

a. The program proposed by the Laboratory and approved through the chain of command in the normal program/budget approval process should be followed. This approval is based on review of Laboratory program documentation by HQ USACE and OCE.

b. Work unit reprogramming actions which result from program cuts directed by DRD should follow the guidance letter used to establish the program. These reprogramming actions must be reported to DRD within 15 days of implementation.

c. Work unit reprogramming actions which exceed \$50,000 and are not in response to DRD directed program cuts must have prior approval of DRD.

d. Laboratories are not authorized to reprogram between Projects or Program Elements. Requests for such reprogramming must be made to CERD-M.

e. Reprogramming that impacts work being executed by more than one R&D Performing Element must be coordinated with all elements involved.

f. Reprogramming that impacts specific DOD, DA or USACE guidance will be coordinated with CERD-M.

g. Reprogramming of funds in 6.3A advanced development programs is not authorized without specific approval of CERD-M.

h. No reprogramming may be made that results in a increase to a program element that was omitted, deleted or specifically reduced by Congress.

i. Changes to the approved program under this reprogramming authority must be provided to CERD-M in the form of revised documentation within 30 days of being approved by the Commander

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and Director, including new starts or stops, changes in funding of more than \$50,000 and changes to milestones that impact the delivery of products planned in the current fiscal year.

j. The Proponent must be notified of all reprogramming actions, regardless of size, within 15 days of implementation.